# ANNUAL REPORT ON JAPAN'S FISHERIES

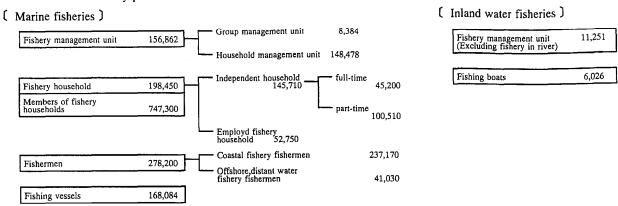
FISCAL 1998



THE MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES
GOVERNMENT OF JAPAN

### Outline of Japan's Fisheries (1997)

O Basic factor of fishery producion



Outline of fishery production 0.86Million tons Distant fishery 0.26Trillion yen Offshore fishery 3.34Million tons 7.26Million tons Marin 0.54Trillion yen fishery 2.07 Trillion yen Coastal fishery 1.78Million tons Total fishery production 7.41Million tons (Excluding marine culture) 0.67Trillion yen 2.22Trillion yen 1.27Million tons Marine culture 0.60Trillion yen 0.09Million tons fishery 0.15Million tons 0.07Trillion yen Inland water fishery 0.16Trillion yen 0.07Million tons

Data: "Fishery Census", "Annual Report on Dynamic Statistics of Fisheries" and "Annual Statistics of Fishery and Aquaculture production", Ministry of Agriculture, Forestry and Fisheries.

Aquaculture

0.08Trillion yen

Japanese fisheries play an important role in providing the people of Japan with a stable food supply. Various fishery products provide about 40% of Japan's animal protein consumption and contribute to the rich diversity of the Japanese diet. Fisheries are also key industries in coastal regions and hold an important position in the regional economy, shared with related industries including the fishery products processing industry. In addition, fishing villages located throughout the country contribute to both the formation and conservation of a fish-eating culture with specific regional characteristics and the preservation of cultural aspects peculiar to Japan, such as festivals and traditional events. They have also been playing an important role in environmental preservation in coastal regions.

Considering the present circumstances surrounding Japanese fisheries, however, in which the fishery resources in the waters surrounding Japan are generally at low levels due to the worsened marine environment and excessive fishing efforts, etc., fishery production in Japan has been continuously decreasing. The decrease in numbers and aging of fishermen has also remarkably advanced. At present there is concern about future, fragility of the production system needed to continuously utilize fishery resources in Japan's surrounding waters and provide a stable supply of marine products to the people of Japan.

In July 1996, Japan signed the "United Nations Convention on the Law of the Sea" and the exclusive economic zone for Japan was established. The total allowable catch (TAC) system was introduced in 1997, and Japan fully entered the "200 nautical miles" era. Under such circumstances, Japan is being asked to reconstruct the framework needed to actively develop fishery policies for the main purposes of preservation and continuous utilization of the fishery resources in its exclusive economic zone. This report mainly shows the results from analyzing the trend of Japanese fisheries since 1997, based on the above-mentioned fundamental recognition, and proposes the future direction in which Japanese fisheries should advance.

This report consists of the following 4 chapters.

- I. Continuous utilization of fishery resources and Japanese fisheries
- II. Present situation of consumption, distribution and processing of fisheries products
- III. Fishery operation and working environment
- IV. Conservation of marine environment and local revitalization

### I. Sustainable utilization of fishery resources and Japanese fisheries

### A. World supply and demand for fishery products

Fishery production (including aquaculture production) worldwide is showing an increasing trend. World fishery production in 1996 rose to 129.8 million tons, 4% over that of the previous year, however the fishery production of major nations, including Japan but excluding China, was generally unchanged. The aquaculture industry has been increasing production, but unstable factors such as a worsening environment for aquaculture farms and the increased cost of feed are becoming remarkable.

About 40% of the world's fishery production has become the subject of international trading. This percentage is high compared to that for major agricultural products. Marine product trading around the world is generally increasing, and the quantity of marine products imported/exported (weight in form passed through Customs) has recently been at the level of over 20 million tons. On a quantity basis however, the rate of increase is slowing, although the unit price of imports/exports is tending to an increase in company with the strengthening of worldwide demand for marine products. Under such circumstances, Japan's fishery product trade in 1996 held a 16% share of the world's marine product imports in terms of quantity, or 30% in monetary terms, both the highest in the world.

On the other hand, fishery product demand is increasing worldwide, mainly due to population increases and economic growth in developing countries and health-oriented dietary concerns in advanced nations. Major nations from which Japan has been importing marine products have also been increasing their supplies for their own domestic consumption.

### B. Japan's supply and demand for fishery products

The supply/demand trend for marine products in Japan shows that the total demand of fishery products in 1997 decreased by 1.1% from that of the previous year, to 11,870,000 tons, because even though the fishery product import increased, the fishing products consumption in Japan decreased. On the other hand, the total supply of fishery products increased by 0.5% over that of the previous year, to 12,730,000 tons, since even though both the fishery product import and domestic fishery production for food decreased, both the fishery product import and domestic fishery production for uses other than food increased.

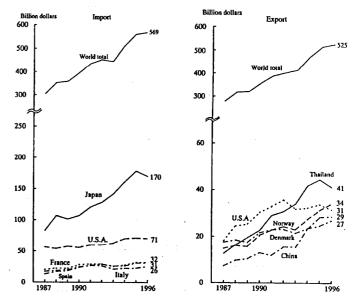
The self-supply rate for edible fish and shellfish increased to 60%, 2 points over that of the previous year. The self-supply rate, which had been tending to decrease, rose because the quantity of marine products for food produced in Japan decreased by a narrow margin, even though the distribution quantity by disposition for domestic consumption decreased by 390,000 tons, the largest drop ever.

### World fishery production transition

### Million tons 140 120 100 Chin 80 Japan 60 40 Others 20 0 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996

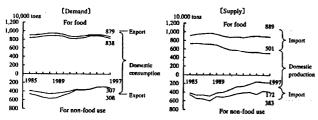
Data sources: FAO "Yearbook of Fishery Statistics-Capture Production", "Aquaculture Production Statistics", and Ministry of Agriculture, Forestry and Fisheries "Fishery and Aquaculture Production Statistics Yearbook"

### Changes in the Value of World Fishery Trade



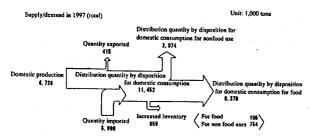
Date source: "Yearbook of Fishery Statistics-Commodities", FAO

### Transition of fish and shellfish supply/ demand in Japan



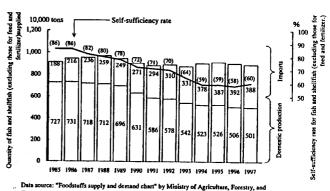
is source: "Foodstuffs supply and demand chan" by Ministry of Agriculture, Forestry, and Flahes: 1) Numerical values shows have been converted to original fishweight, and do not include also measured.

2) Numerical values for 1997 are "prompt report" values. Data source: "Foodstuffs supply and de



Data source: "Foodstuffs supply and demand chart" by Ministry of Agriculture, Forestry, and Fisheries
Notes: 1) Numerical values shown have been converted to original fish weight, and do not include whales or seaw
2) Numerical values for 1997 are "prompt report" values.

### Transition of self-sufficiency rate for fish and shellfish (excluding those for feed and fertilizer)



### C. Present world situation of preservation and management of marine resources

The International plan of Action for the Management of fishing capacity was agreed to at the United Nations' Food and Agriculture Organization (FAO) intergovernmental meeting held in October 1998, and the Plan was adopted at the Committee on Fisheries in February 1999. Regarding the reduction of large-scale tuna longline fleets, included in the Action Plan, Japan decided to reduce the number of its large-scale tuna longline fleets by 132, equivalent to 20% of its fleets, by scrapping them.

Recently, re-flagged vessels have been increased for escaping from international conservation and management measures and they have been causing problems by carrying out undisciplined fishing operations that have undermined the effectiveness of international marine resource conservation and management measures. Because of this, a movement for urgent elimination of unsustainable fisheries by non-member nations has been activated in regional fishery management organizations such as the International Commission for the Conservation of Atlantic Tunas (ICCAT). On the other hand, a movement for establishment of regional fishery management organizations has also become active concerning the sea areas for which regional fishery management organizations have not yet been established.

# D. Trends of fishery production in Japan and marine resources in surrounding water areas

Annual fishery production in Japan in 1997 was 7.4 million tons, the same as in the previous year, because even though coastal fishery production decreased, offshore and distant water fishery production increased, so that the tendency for the fishery production trend to decrease since 1989 has weakened. In fishery production by species, fishery production of each of Japanese anchovy (half-mouth sardine), common squid, and salmon decreased from the previous year, but that of mackerels, tunas, and saury increased from the previous year. The amount of fishery production in 1997 increased to ¥2.2 trillion, 1% over that of the previous year.

Concerning the recent conditions of resources of major species in Japan's adjacent waters, some species and substock resources are in good condition, but the resource conditions of major species are generally at medium or low levels, and are unchanged or tending to decrease. The reclamation of seaweed beds and tidelands, collection of sea gravel, decline in the reproductive power of resources due to the loss of breeding and nursery grounds accompanying a decrease of natural seashore, increased size of fishing vessels, adoption of high-performance fishing apparatus, and increased fishing efforts by foreign fishing vessel operations can all be mentioned as background to the poor condition of resources. Under the circumstances, in which the level of fisheries resources in the Japan's adjacent waters is generally sluggish but the fishing effort by Japanese fisheries is at a high level, it is important to accomplish recovery of fishey resources by increasing the efficacy of resource management while achieving a reduction of fishing effort.

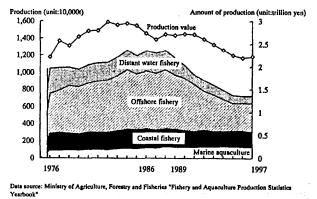
### Conservation and management measures by major regional fishery management organs

Name	Subject water areas and member nations	Major conservation and management measures	Non-member nations
International Commission for the Conservation of Atlantic Tunas (I C C A T)	Entire area of Atlantic Ocean (and the Mediterranean Sea) 24 nations and I organ, including Japan, USA, Canada and Korea, have joined.	Regulation of bluefin tuna catch Regulation of minimum body weight of yellowfin tuna, bigeye tuna and bluefin tuna Action plan for non-member nations that weaken bluefin tuna conservation and mana- gement measures, action plan for ships that have their nationality registered in non-mem ber nations for convenience, and recognition of cooperative non-member nations	Belize, Honduras, Taiwan
Inter-American Tropical Tuna Commission (IATTC)	Eastern Pacific Ocean 10 nations, including Japan, USA, Vanuatu and Venezuela, have joined.	Total catch control for yellowfin tuna in regulated areas Control of round haul netters' fishing capacity (maximum loadable quantity of catch) Catch Catch Catch control for small bigeye tuna	Belize, Honduras, Taiwan
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	All migratory water areas (southern hemisphere high-latitude sea areas) 3 nations of Japan, Australia and New Zealand have joined.	Total catch quota in 96/97 (ishing season : 11,750 tons (including 6,055 tons for Japan)     Action plan concerning furtherance of cooperation with and joining of CCSBT by non-member nations and areas	Indonesia, Korea, Taiwan, China
Indian Ocean Tuna Commission (IOTC)	Indian Ocean 16 nations and 1 organ, including Japan, India, Korea and Australia, have joined.	International fishing boat registration system Requesting that non-member nations which carry out fishing operations in Indian Ocean join IOTC soon	Belize, Honduras, Indonesia, Taiwan
Commission on Conservation of Antarctic Marine Living Resources (CCAMLR)	Sea areas surrounding the South Pole 22 nations and 1 organ, including Japan, USA and South Africa, have joined.	Establishment of TAC for each species and sea region     Mounting of vessel monitoring system (VMS)     Inspection of fishing boats at time of entry into port	China, Panama, Belize

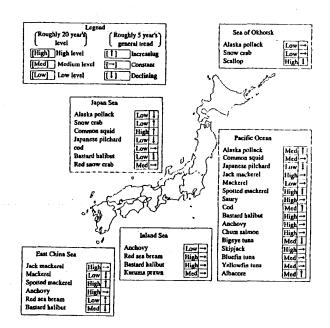
Data source: Fisheries Agency

Note: 1) "Non-member nations, etc." means "major nations, etc. that have not joined the agreement but are engaged in fisheries in the subject water areas".

### Production transition by sector



### Trends in Major Fishery Resources



Data source: Fisheries Agency

### E. Japan-Korea and Japan-China fishery relationships

Japan and Korea signed a new fishery agreement at the end of November 1998, and this agreement went into effect on January 22, 1999. Japan and Korea have also agreed on the conditions of mutual common piscary rights for their exclusive economic zones, and a resource preservation and management system based on the purposes of the United Nations Convention on the Law of the Sea was completed between Japan and Korea.

In the future, we must make efforts to achieve the early establishment of a new fishery order between Japan and China. It is also necessary to achieve sustainable utilization of fishery resources by taking effective measures for resource preservation and management in water areas such as the provisional fisheries zone where both nations' fishing boats operate at the same time under a "maritime flag-state," through negotiations by the Japan and People's Republic of China Fisheries Joint committee and the Japan and Republic Korea Fisheries Joint Committee.

Also, based on the agreement enacted in May 1998 between Japan and Russia concerning the framework of fishery operation by Japanese fishing vessels within the 12-nautical-mile water area around the 4 northern islands off Hokkaido, fishing operations by Japanese fishing boats within the 12 nautical miles of water area around these islands has been actualized.

### F. Total Allowable Catch system application situation

In 1997 the Total Allowable Catch (TAC) system in Japan involved 6 species: saury, Alaska pollack, Japanese mackerel, Japanese pilchard, mackerels, and snow crab. Common squid were added to the TAC system in 1998. Regarding compliance with TAC for subject species in 1997 and 1998, the catch of those species was roughly within the TAC range partly due to fishermen's cooperation with voluntary resource management efforts.

# G. Present situation of community-based-management-type fisheries, and of aquaculture, fisheries based on stock enhancement

Community-based fisheries management started in the 1970s as a movement by fisheries cooperative association-based organizations for the purposes of maximum effective utilization of Japan's adjacent waters and the stabilization of fishery operation. At present, various programs such as sandfish resource management in the northern Japan Sea area are being carried out in accordance with the actual situation of fisheries in each location.

Also, because programs for resource propagation have been actively developed, resource levels in the Inland Sea of not only chum salmon and scallop, but also of bastard halibut and red sea bream, and of bastard halibut in the northern Pacific Ocean area, are stable, with transition in high or medium level ranges.

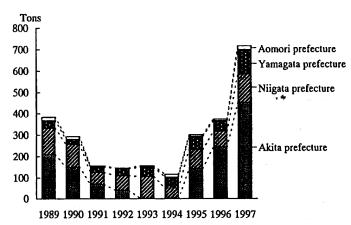
Marine culture fishery production has been tapering off recently, with a background of restrictions on culture sites, decline of fish prices due to excessive supply, and great changes of feed supply conditions.

Total allowable catch and actual catch result

Specified marine	1 9	9 7	19	9 8	1999
bio-resources	Total allowable catch	Actual catch results	Total allowable catch	Actual catch results	Total allowable catch
Saury	300,000t	285,000t	300,000t	141,000t	330,000t
Alaska pollack	267,000t	248,000t	311,000t	259,000t	332,000t
Jack mackerel	370,000t	295,000t	430,000t	281,000t	450,000t
Japanese pilchard	720,000t	268,000t	520,000t	154,000t	370,000t
Chub mackerel and spotted mackerel	700,000t	726,000t	700,000t	466,000t	780,000
Common squid			450,000t	151,000t	500,000t
Snow crab	4,815t	4,300t	4,945t	4,300t	5,219t

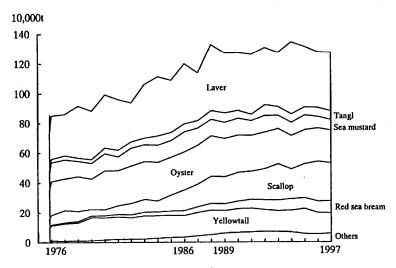
Data source : Fisheries Agency

### Transition of sandfish catches in 4 prefectures along the Japan Sea



Data source: Ministry of Agriculture, Forestry and Fisheries "Fisheries and Aquaculture Production Statistics Yearbook"

### Production transition for individual marine aquaculture species



Data source: Ministry of Agriculture, Forestry and Fisheries "Fisheries and Aquaculture Production Statistics Yearbook"

### H. For sustainable utilization of fishery resources

To achieve a sustainable supply of fishery products to consumers in Japan it is important to ensure recovery of fishery resources in the once highly productive Japanese exclusive economic zone. For this purpose, while curtailing a catch effort that has become excessive relative to the resource level, the promoting of an appropriate TAC system together with the existing fisheries management system according to the Fisheries Law and increasing the actual efficacy of resource management are necessary. It is also important to appropriately handle various themes including upgrading of the community based fisheries management program and improving the efficiency of aquaculture and fisheries based on stock enhancement.

In addition, it is important for Japan to play an active role in international society for the establishment of sustainable fisheries through positive measures for conservation and management of fishery resources carried out under international cooperation, together with responsible fishery practices based on resource conservation and management measures based on scientific grounds.

### II. Present situation of consumption, distribution and processing of fishery products

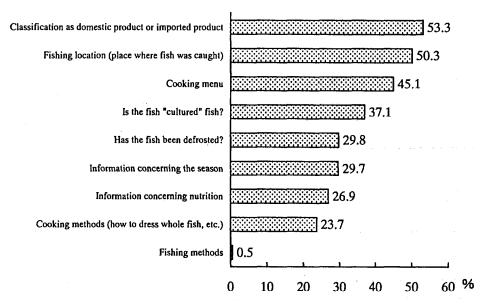
### A. Consumption fishery products

The tendency for consumers to demand fresher fish and shellfish has intensified, with the background of greater desire for "safety-oriented", "health-oriented" and "genuine-oriented" consumption. Consumers are also making more stringent demands for the disclosure of information concerning place of production, etc., because both domestic and imported varieties of fishery products have recently appeared on the market.

The amount of nominal expenditure on fish and shellfish per person in 1997 was the same as in 1996 because of the cooling-off of personal consumption due to business recession. The real expenditure for fish and shellfish per person in 1997, as adjusted by the consumer price index, saw a decrease by 1.9% from that of the previous year.

Fishery products contain useful functional ingredients including DHA, in addition to good quality protein, fat, etc., and Japanese people have long been strongly aware that fishery products play an important role in achieving a healthy and richly varied diet. In Japan, the tendency for younger age groups to dislike eating fish and shellfish has been noted recently, while on the other hand, many other age groups would like to increase their consumption of fishery products.

### Information for reference when purchasing fish



Data source: Ministry of Agriculture, Forestry and Fisheries "1997 fiscal year — results of second periodic food consumption monitoring survey"

Transition of real annual expenditures per person for fish and shellfish

	1997 expenditure	Nominal increase decrease	Real incre	ease/decreas	e rate relativ	e to previous	year (%)
	(nominal yen)	rate relative to previous year	1993	1994	1995	1996	1997
Food	309,393	1.7	Δ 1.1	Δ 1.3	△ 0.5	1.7	△ 0.1
Fish and shellfish	37,078	0.3	△ 2.6	△ 4.5	1.3	△ 1.8	△ 1.9
Fresh fish and shellfish	22,167	1.3	△ 0.6	△ 4.2	2.8	△ 5.1	Δ 1.1
Salted or dried fish and shellfish	7,056	△ 1.4	△ 5.9	△ 4.0	0.0	4.5	△ 3.1
Fish meat paste	3,472	△ 3.5	△ 5.5	△ 4.2	0.6	1.3	△ 4.3
Other processed fish and shellfish products	4,383	0.8	△ 4.2	△ 7.3	△ 2.7	3.9	△ 2.8
Meat	26,542	4.0	△ 2.5	△ 3.1	1.1	△ 2.3	△ 0.2
Cooked food	29,185	7.1	1.7	△ 0.1	3.8	1.8	4.6
Eating-out	54,989	3.0	△ 1.2	△ 1.0	0.8	4.0	0.4

Data source : Prepared from Management and Coordination Agency "Housekeeping survey yearbook" and "Consumer commodity indices yearbook"

Notes: 1) The housekeeping survey was done for households with 2 or more family members, none of whom were farmers, forestry workers or fishermen.

 Increase/decrease rate relative to the previous year was calculated using the values determined according to the amount of expenditure by each consumer, which was adjusted using the consumer price index (1995=100).

### B. Distribution of fishery products

Recently in Japan, the amounts of various imported fishery products have increased in fishery products distribution, and distribution by means other than traditional marketing methods (such as direct transactions between producers and large-lot users such as large mass-sales stores) has become active. Under such circumstances, many fishery operators consider that markets in landing areas hold the central position for fishery product sales.

In the fresh fish retail business, purchasing of fresh fish from fish specialty stores, known as "fish stores", with working staffs of 5 persons or less, has decreased, and the number of those stores has been dropping annually. Sales by individual fish stores have been sluggish, but sales by stores operating multiple shops have been increasing. The food service industry has been growing steadily to date, although its growth rate is now slowing due to the sluggish growth of business and the slackening of corporate demand, etc. On the other hand, the industry manufacturing lunch and everyday dishes for consumers to purchase and eat them at home (so-call "nakashoku" industry), has been growing rapidly, backed by the increased population of women in business, larger numbers of single-person households (mainly young people), and life style changes such as the expansion of social life to 24 hours per day. Increases in the product lines of prepared lunch and daily food items in supermarkets and department stores have accompanied these.

Also, while personal consumption is showing only sluggish growth, recognition by the large mass-sales stores and food service industry, etc. of domestic products as merchandise originating in the "food culture" unique to each region is increasing.

### C. Processing of fishery products

Production of processed fishery products in 1997 was 3,300,000 tons. The recent production trends for major processed fishery product items have generally tended to remain unchanged or to decrease. In particular, there is tenacious demand, mainly by the elderly, for surimi-based products, but production of these products is decreasing due to sluggish general consumption and unstable supply of raw materials. The production of fish oil, fish meal and fish scraps is also decreasing because production of Japanese pilchard, the main raw material, has decreased drastically. Fishery product processing management units have decreased to 15,000, and the amount of raw material fish and shellfish has dropped due to decreased domestic fishery production. A decline of profitability can also be seen due to the trend toward lower product prices. Distributors and fishery product processors are planning or carrying out new measures in various fields, such as the introduction and improvement of inspection equipment, and accomplishment of training for employees, in order to provide safe food.

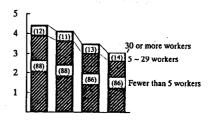
In addition, some leftovers generated by the fishery product processing industry are utilized as raw materials for fish meal, and fish scraps for feedstuff and fertilizer, but in areas where the fishery product processing industry is thriving, the disposal of these leftovers from fishery product processing involves enormous expense.

### Change of stores from which fresh fish were purchased

# Ordinary retail store (specialty store) Sore) General (non-specialty store) General (non-specialty store) Supermarket Supermarket Co-op Department store Retail market

Data source: Ministry of Agriculture, Forestry and Fisheries "1997 fiscal year - Results of first periodic food consumption monitoring survey(Food purchasing actions)"

# Transition of number of stores per staff scale in fresh fish retail business

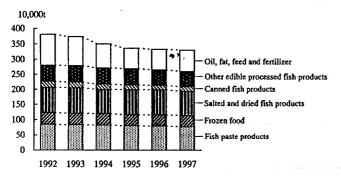


1988 1991 1994 1997

Data source: Ministry of International Trade and Industry "Commerce statistics table"

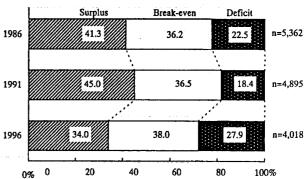
Note: Numerical values in parentheses show percentages of constituents (%).

## Transition of production of major processed fish products



Data source: Ministry of Agriculture, Forestry and Fisheries "Fishery products distribution statistics year book"

# Transition of constituent rates for each of income and expenditure for fish-processing industry sites



Data source: Fisheries Agency "Report of Fish processing industry survey results"

### II. Fishery operation and working environment

### A. Present situation of fishery management units

The number of fishery management units has been decreasing annually because of business closures due to the advanced age of fishery operators and a shortage of successors. In 1997 the number of fishery management units decreased by 2% from the previous year, to 157,000 units. Among these, coastal fishery management units decreased by 2% from the previous year to 149,000, small-to-medium fishing enterprises decreased by 1% to 7,600, and large-scale fishing enterprises decreased by 5% to 147.

### B. Present fishery operation situation

Fishery income for the coastal fishing vessel fishery in 1997 was down by 2% from that in 1996. Even though fisheries expenditures in 1997 decreased by 2% from those in the previous year, fisheries income still dropped by 2% due to decreased catch and other factors. Fishery profit per small and medium sized fishery management unit in 1997 put the balance of payments into a comfortable surplus due to increased catch, etc., for the first time in the 6 years since their balance moved into the red in 1992. However, in the financial terms, their ratios of net wortu, which indicates the safety of capital, is hovering at a low level, their dependence on loans is high, and their management structure is still fragile.

It is now necessary to improve fishery house management, making efforts to rationalize fishery management by curtailing production cost, etc., in order to maintain or increase fishery resources by appropriate management. Operators of small and medium sized fisheries in particular have been preferentially pursuing large landed quantities, and this has resulted in a worsening of their management efficiency. Urgent tasks for improvement of their fishery house management are promoting re-organization and improvement of the production structure of small and medium sized fishery management units, correcting the catch effort which has become excessive to the quantity of resource, and simultaneously reducing production cost, etc.

### C. Fishermen trends and working environment

The decrease of fishermen is continuing. Even though the rate of decrease of the number of fishermen in 1997 was lower than in the previous year, it still dropped by 3% from that in 1996, to 278,000 workers. The number of coastal fishermen decreased by 3% from the previous year, to 237,000, and offshore and far seas fishermen decreased by 5%, to 41,000. Concerning male workers in each age stratum, the percentage in the over-60 age stratum has risen, with the rate in 1997 increasing by 2 points over that in the previous year, to 42%.

Labor demand for domestic fishing vessel crews is generally inactive. The number of new fishermen has decreased, while the numbers of those leaving their jobs due to the aging of fishermen is expected to further increase in the future, causing the seriousness of the fishery labor force shortage to increase. Under such circumstances, the so-called "maru-ship", meaning letting foreign enterprises use Japanese fishing vessels, taking foreign ratings on board, and chartering these vessels, was introduced in July 1998.

### Transition of number of fishery management units

	1993	1994	1995	1000		Increase/d	ecrease rate %)
	1993	1994	1995	1996	1997	1996/1995	1997/1996
Total	171,524 (100.0)	167,367 (100.0)	163,169 (100.0)	159,897 (100.0)	156,862 (100.0)	△ 2.0	Δ 1.9
Coastal fishery management units	162,795 (94.9)	158,948 (95.0)	155,125 (95.1)	152,087 (95.1)	149,138 (95.1)	△ 2.0	Δ 1.9
Powered boats	117,330 (68.4)	113,783 (68.0)	110,838 (67.9)	109,326 (68.4)	108,333 (69.1)	Δ 1.4	△ 0.9
Set nets and beach seines	8,744 ( 3.9)	7,056 (4.2)	7,012 ( 4.3)	6,743 ( 4.2)	6,542 ( 4.2)	△ 3.8	△ 3.0
Marine aquaculture	32,956 (19.2)	32,772 (19.6)	31,765 (19.5)	30,549 (19.1)	29,079 (18.5)	△ 3.8	△ 4.8
Other than above	5,785 ( 3.4)	5,337 ( 3.2)	5,510 ( 3.4)	5,469 (3.4)	5,184 ( 3.3)	△ 0.7	Δ 5.2
Small and medium sized fishery management units	8,551 ( 5.0)	8,257 ( 4.9)	7,885 ( 4.8)	7,656 (4.8)	7,577 ( 4.8)	△ 2.9	Δ 1.0
Large-scale fishery management units	178 ( 0.1)	162 ( 0.1)	159 ( 0.1)	154 ( 0.1)	147 ( 0.1)	△ 3.1	△ 4.5

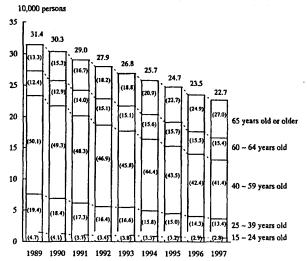
Data sources: Ministry of Agriculture, Forestry and Fisherles "Fishery census" and "Fishery dynamic statistics yearbook"

### Fishery workers transition

		1993	1994	1995	1996	1997	Increase / decrease rate (%)			
		****	1773	' ' ' ' '	1 8 9 0		1996/1995	1997/1998		
	Total	171,524 (100.0)	167,367 (100.0)	163,169 (100.0)	159,897 (100.0)	156,862 (100.0)	△ 2.0	Δ 1.9		
For each fishe ries sector	Coastal fishermen	275,198 (84.7)	263,040 (84.1)	254,240 (84.3)	244,110 (84.9)	237,170 (85.3)	Δ 4.0	△ 2.8		
	Offshore and far seas fishermen	49,688 (15.3)	49,840 (15.9)	47,200 (15.7)	43,270 (15.1)	41,030 (14.7)	Δ 8.3	Δ 5.2		
Classi fication as self-	Self-employed	236,592 (72.8)	229,710 (73.4)	223,480 (74.1)	215,330 (74.9)	210,380 (75.6)	Δ 3.6	△ 2.3		
employ ed or employ ed	Employed	88,294 (27.2)	83,180 (26.6)	77,950 (25.9)	72,050 (25.1)	67,830 (24.4)	△ 7.8	Δ 5,9		
Sex	Male	267,863 (82.4)	257,430 (82.3)	247,200 (82.0)	235,040 (81.8)	227,100 (81.6)	△ 4.9	△ 3.4		
	Femilie:	57,023 (17.6)	55,460 (17.7)	54,230 (18.0)	52,340 (18.2)	51,110 (18.4)	△ 3.5	Δ 2.4		

Data sources: Ministry of Agriculture, Forestry and Fisheries "Fishery census" and "Fishery dynamic statistics yearbook"

### Age structure transition for male fishery workers



Data sources: Ministry of Agriculture, Forestry and Fisheries "Fishery census" and "Fishery dynamic statistics yearbook"

Note: Numerical values in parentheses show the constituent percentage (%).

### IV. Conservation of marine environment and local revitalization

### A. Relationship between fisheries and environment

The fishing industry is greatly dependent on the environment and ecosystems, and conserving these in good condition is very important in order to achieve healthy and sustainable development of fisheries and to produce and supply safe fishery products.

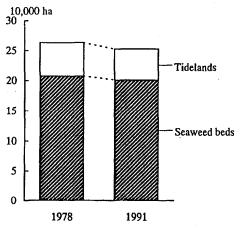
While the world's population is continuing to grow, the role of fisheries in food supply has become more important than before. Japan needs to continue promoting sustainable fisheries, while simultaneously making efforts to obtain appropriate international understanding for fisheries, by actively working for the conservation of wildlife species and their habitat environments. It is necessary not only to achieve appropriate conservation and management of fishery resources and their rational utilization based on scientific grounds for this purpose, but also to accumulate scientific knowledge and operate fisheries with consideration of the environment and ecosystems through international cooperation.

### B. Regional activities and conservation of marine environment

Seaweed beds and tideland are not only important as fishing grounds. They also have other important and versatile functions including their function as locations for the propagation of aquatic life including the spawning and growth of fry and juvenile fish, and water purification, but 6,403 hectares of seaweed beds and 3,857 hectares of tideland in coastal areas in Japan were destroyed by land reclamation, etc., during the 13 years from 1978 to 1991. Also, the amount of seashore maintaining natural conditions is decreasing and erosion of sand beaches is advancing. These have recently become serious problems. In addition, fishery damage such as that caused by red tides and oil pollution has still not been eliminated. It is important to provide powerful encouragement for the passage of measures to control the sources of dioxins. In Japan at present, concerned ministries and agencies are cooperating with each other, while the investigation of actual conditions of dioxin accumulation in fish and shellfish, and measures to control dioxin sources, is being carried out.

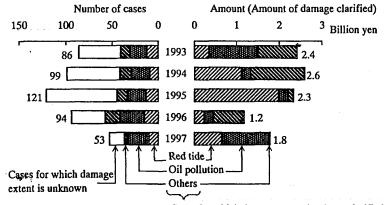
Under circumstances in which national concern about marine pollution and the protection of aquatic life is increasing, beach-cleaning activities by organizations related to fisheries and by fisheries cooperative association-based organizations are being energetically carried out. The number of participants in simultaneous beach cleaning throughout Japan in 1996 exceeded 1 million persons; in 1997 it was also on the 1 million-person scale. There are many cases of fishermen themselves carrying out tree-planting activities, and of tree-planting activities by fishermen, etc. being developed over wide areas with the cooperation of forestry associations, etc.

### Transition of remaining areas of seaweed beds and tidelands



Data source: Environment Agency "4th Natural environment conservation basic survey - sea area biological environment survey"

### Situation (sea surface) of sudden fishery damage arising from by water pollution, etc.



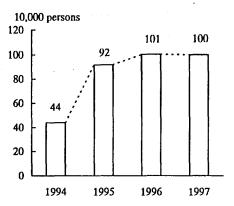
Cases for which damage extent has been clarified

Data source: Fisheries Agency

Note: The value of damage in fiscal year 1996 excludes that done by the

Nakhodka oil outflow incident.

# Transition of numbers of people participating in simultaneous beach cleaning throughout Japan



Data source: Sea and Beach Environment Beautification Promotion Organization

### C. Creation of vital fishing villages

The young age group population working in fisheries in Japan has been decreasing annually, and a decrease in the number of fishermen is obvious. On the other hand, workers from a wide range of age groups are entering fisheries, with the background of an increased desire for a nature-oriented lifestyle by people who formerly lived in cities, and a diversified sense of the value of labor.

Also, fishery regions possess precious regional resources including fresh fish and shellfish, rich natural environments and scenic views, and traditional culture with individuality, etc. Recently there have been many cases of local revitalization being achieved by the holding of periodic morning markets by the fisheries cooperative associations in a producing area, whale-watching and diving projects by fisheries cooperative associations, and fishery experiences involving even urban residents.

### Conclusion.

The following shows the prospects for fundamental themes needed to ensure a stable supply of fishery products for the Japanese people by building up a solid infrastructure for Japanese fisheries.

### A. Promotion of sustainable utilization of fishery resources and responsible fisheries

In order to ensure a stable supply of fishery products for the Japanese people, it has become essential to not only do methodical foreign trading of fishery products with consideration of the conditions of resources, but to also promote sustainable fisheries. For this, it is important to achieve recovery of the fishery resources in Japan's exclusive economic zone, originally an area of good fishing grounds with high productivity. It is therefore important to contribute to more effective maintenance of fishery resources and to their increase by applying the TAC system appropriately while reducing catch effort which has become excessive relative to resources, simultaneously achieving further cooperation between each type of project such as community-based-management-type fisheries and aquaculture fisheries based on stock enhancement. For the establishment of sustainable fisheries, Japan has also decided to accomplish responsible fisheries management founded on appropriate measures for conserving and managing resources, based on scientific grounds, taking fishery environment and ecosystems into consideration, while simultaneously playing a positive role in international society.

### "Fishermen's forests" spereading throughout Japan



80° 0 0

Date source: National Federation of Fisheries Co-operative Associations

### Major motivation for employment (multiple answers)

(Unit: %)

	Family reasons such as succeeding to parent's profession	Fondness for sea	Wanted to work for fisheries	Can set own schedule freely	Can create own original ideas and techniques
19 years old or younger	55.4	33.5	31.0	8.1	8.9
20~29	53.6	31.6	26.3	14.1	11.6
30~39	38.5	37.5	26.6	15.7	17.0
40~49	26.4	38.3	29.4	20.4	14.9
50~59	9.1	5 4 . 3	43.1	21.3	12.2
0 years old or lder	6.9	50.2	42.6	23.2	10.4

Data source: Ministry of Agriculture, Forestry and Fisheries "Survey of people beginning to work in fisheries"

# B. Establishment of distribution and processing system corresponding to needs of consumers and users

To correspond with the upgrading of consumers' needs, the market in each producing area, which is the starting point of fishery product distribution, must promote its unification linked with the amalgamation of fisheries cooperative associations, needs to establish a distribution system possessing vitality, through drastic expansion of the quantity of collected fishery products. The market also needs to make efforts to provide the information needed by consumers and supply fishery products, while meeting people's expectations for domestic fishery products in such areas as high-grade freshness, safety, and seasonal feeling to the maximum.

Japanese fishery product processing industry, which includes many small and medium enterprises, needs to make efforts to develop a healthy management structure, for example by continuing and intensifying appropriate support for the introduction of HACCP, in response to consumers' requests. It is also necessary to establish production activity that puts less of a load on the environment by developing low-cost technology for the treatment and recycling of leftovers from fishery-product-processing work.

### C. Stabilization of fishery house management and rationalization of production system

Healthy fishery house management must be done as a precondition for promoting sustainable fisheries. Subjective effort by each management unit is important for the improvement of management, and promotion of the reorganization and improvement of small- and medium-sized fishery management unit production structures has become an urgent task. It is also important to make investments for equipment appropriate by reducing the number of fishing vessels belonging to each management unit, using fishing vessels for long periods of time, achieving energy saving, and using smaller fishing vessels, as well as reducing fixed expenses and improving profitability. In addition, concerning measures for coping with the diversification of distribution routes, it is necessary to thoroughly control freshness and quality in each stage from production to distribution in order to stabilize fishery management and ensure fishery income. Simultaneous efforts must be made to increase the added value of catch, seek new outlets, and improve selling methods.

### D. Creation of attractive permanent residence zones with fisheries as their cores

To promote fishery regions, it is essential to convert fisheries to attractive industries, as well as to accelerate the permanent settlement of young people in these regions. It is also important to create a regional society which will provide an attractive permanent residence zone for the people living there by bettering both labor and living environments through improvement of fishing ports, the promotion of labor-saving for fishery work, etc. In addition, it is important to vitalize fishery regions by increasing the opportunities they provide for earning income and finding employment, making extensive use of regional resources, providing places for education such as that gained by learning from experience, and creating places for friendship and social exchanges between local residents and urban residents.



# Changes in production Volume and Value by Type of Fishery and Aquaculture ( Unit:in thousand tons for volume and in hundred million yen for value

-	( nunared million yet) for value )										
								Increase/dec	rease rate(%)		
		1985	1993	1994	1995	1996	1997	'96/'95	'97/'96		
	Total	12,171	8,707	8,103	7,489	7,417	7,411	$\Delta$ 1.0	$\Delta$ 0.1		
	Marine Fishery	11,965	8,530	7,934	7,322	7,250	7,258	Δ 1.0	0.1		
	Distant water fishery	2,111	1,139	1,063	917	817	863	△ 10.9	5.7		
v	Offshore fishery	6,498	4,256	3,720	3,260	3,256	3,343	Δ 0.1	2.7		
Volume	Coastal fishery	3,356	3,135	3,151	3,145	3,177	3,051	1.0	△ 4.0		
\ \ \	Fishery	2,268	1,861	1,807	1,831	1,901	1,779	3.8	△ 6.4		
	Aquaculture	1,088	1,274	1,344	1,315	1,276	1,273	△ 2.9	△ 0.3		
	Inland water fishery	206	177	169	167	167	153	Δ 0.1	△ 8.2		
	Fishery	110	91	93	92	94	86	2.2	△ 8.4		
	Aquaculture	96	86	77	75	73	67	Δ 2.8	△ 7.9		
	Total	29,020	24,888	23,685	22,496	21,953			1.2		
	Marine Fishery	27,144	23,232	22,089	20,851	20,281	20,663	Δ 2.7			
	Distant water fishery	6,828	4,142	3,471	2,770	2,619	2,633	△ 5.4	0.5		
	Offshore fishery	7,583	5,657	5,504	5,559	5,300	5,377	△ 4.7	1.4		
Value	Coastal fishery	12,733	13,433	13,114	12,522	12,362	12,653	Δ 1.3	2.4		
\$	Fishery	7,508	7,364	6,844	6,783	6,708	6,664	Δ 1.1	△ 0.7		
	Aquaculture	5,225	6,069	6,270	5,739	5,654	5,989	Δ 1.5	5.9		
	Inland water fishery	1,761	1,649	1,590	1,637	1,665	1,556	1.7	△ 6.5		
	Fishery	608	634	668	703	732	737	4.1	0.6		
	Aquaculture	1,154	1,015	922	934	932	819	△ 0.2	Δ 12.1		

Date: "Annual Statistics of fishery and Aquaculture Production", Ministry of Agriculture, Forestry and Fisheries.

# Changes In production Volume and Value by Type of Major Marine Fishery (Unitin thousand tons for volume and in hundred million yen for value)

		yen for value									
								Incr	ease/dec	rease	rate(%)
	-	1985	1993	1994	1995	1,996	1,997	'9	6/'95	'9	7/96
	Total	10,877	7,256	6,590	6,007	5,974	5,985	Δ	0.6		0.2
	Distant water trawl	806	366	326	255	248	241	Δ	2.6	Δ	3.0
	∫in northern waters	544	160	146	92	109	103		18.2	Δ	5.2
	lin southern waters	263	206	180	163	139	138	Δ	14.4	Δ	1.3
	Large trawl in East China Sea	126	52	45	42	31	27	Δ	25.4	Δ	14.3
	Medium trawl	741	404	442	519	496	545	Δ	4.3		9.8
5	Small trawl	376	425	465	475	471	448	Δ	0.9	Δ	4.8
Volume	Surrounding nets	4,813	2,955	2,459	1,886	1,937	1,860		2.7	Δ	4.0
>	Tuna long line	335	306	284	276	246	254	Δ	11.1		3.4
	Skipjack pole-and-line	240	212	169	174	143	180	Δ	17.9		26.0
	Saury stick held dip net	242	275	250	267	214	284	Δ	19.9		32.9
	Squid angling	234	467	441	376	423	450		12.3		6.6
	Set nets	623	594	604	606	678	633		11.9	Δ	6.6
	Shellfish,Seaweed,collecting	332	253	208	224	217	207	Δ	3.1	Δ	4.7
	Others	2,008	946	897	906	870	855	Δ	4.0	Δ	1.7
	Total	21,919	17,163	15,819	15,112	14,628	14,674	Δ	3.2		0.3
	Distant water trawl	1,319	534	449	294	247	248	Δ	16.2		0.5
	∫in northern waters	503	212	195	143	118	115	Δ	17.1	Δ	2.6
	lin southern waters	816	322	254	151	128	133	Δ	15.3		3.3
	Large trawl in East China Sea	504	221	208	146	112	95	Δ	23.2	Δ	14.9
	Medium trawl	1,066	869	868	846	758	758	Δ	10.4	Δ	0.0
2	Small trawl	1,772	1,597	1,660	1,699	1,634	1,611	Δ	3.8	Δ	1.4
Value	Surrounding nets	3,244	2,315	2,194	2,253	2,164	2,211	Δ	4.0		2.2
	Tuna long line	3,286	2,943	2,336	2,034	2,035	1,941		0.1	Δ	4.6
	Skipjack pole-and-line	741	513	483	449	485	540		7.9		11.4
	Saury stick held dip net	171	164	162	202	235	287		16.3		22.1
	Squid angling	1,322	1,237	1,280	1,083	1,029	1,024	Δ	5.0	Δ	0.5
	Set nets	1,822	1,802	1,492	1,522	1,433	1,485	Δ	5.9		3.7
	Shellfish,Seaweed,collecting	829	870	725	757	715	699	Δ	5.6	Δ	2.3
_	Others	5,845	4,096	3,962	3,827	3,782	3,774	Δ	1.2	Δ	0.2

### Changes In Marine Fishery production Volume and Value by Type of Fish

(Unit:in thousand tons for volume and in hundred million yen)

		\for value								
								Increase/dec	rease rate(%)	
		1985	1993	1994	1995	1996	1997	'96/'95	97/'96	
	Total	10,877	7,256	6,590	6,007	5,974	5,985	Δ 0.6	0.2	
	Tuna, Marlin	439	391	375	366	312	367		17.6	
	Skipjack and Frigate mackerel	339	373	324	336	295	346	Δ 12.1	17.3	
	Salmon, Trout	203	230	240	282	319	277	13.1	△ 13.0	
	Sardune and Anchovy	4,198	* 2,028	1,505	1,016	773	632	△ 24.0	Δ 18.2	
	Japanese pilchard	3,866	1,714	1,189	661	319	284	△ 51.7	Δ 11.1	
	Jack mackerel and Scad	225	362	374	385	388	373	0.7	Δ 3.7	
5	Mackerel	773	665	633	470	760	849	61.9	11.6	
Volume	Saury	246	277	262	274	229	291	Δ 16.2	26.9	
>	Yellowtail	.33	43	54	62	50	47	Δ 18.4	△ 6.2	
	Flounders, Halibuts, soles	214	88	78	83	91	87	9.9	ı	
	Cod and pollack	1,650	445	445	395	389	397	l		
	Alaska pollack	1,532	382	379	339	331	339			
	Sea bream	26	26	25	27	28	27	5.1	Δ 3.6	
	Squid and Cuttlefish	531	583	589	547	663	635	21.2	Δ 4.2	
	Common squid	133	316	302	290	444	366	53.0		
	Others	2,000	1,745	1,684	1,765	1,676	1,656			
-	Total	21,919	17,163	15,819	15,112	14,628	14,674	Δ 3.2		
	Tuna, Marlin	4,053	3,379	2,811	2,419	2,385	2,401		0.7	
	Skipjack and Frigate mackerel	872	711	677	602	639	748	6.2	17.1	
	Salmon, Trout	1,254	1,106	736	684	641	726	△ 6.3	13.4	
	Sardune and Anchovy	1,268	944	948	1,069	784	760	△ 26.7	△ 3.0	
	Japanese pilchard	717	435	412	454	219	191	Δ 51.7	△ 12.9	
	Jack mackerel and Scad	638	662	570	655	730	687	11.4	Δ 5.8	
· o	Mackerel	710	451	431	425	539	587	26.8	8.9	
Value	Saury	173	165	166	206	242	291	17.6	20.6	
	Yellowtail	268	305	328	297	290	344	Δ 2.4	18.4	
	Flounders, Halibuts, soles	1,059	754	· 714	676	714	700	5.7	Δ 2.0	
	Cod and pollack	1,506	580	542	459	400	429	Δ 13.0	7.3	
	Alaska pollack	1,258	425	396	336	272	303	△ 18.9	11.2	
	Sea bream	452	361	360	333	349	- 321	4.7	△ 8.0	
	Squid and Cuttlefish **	2,645	1,679	1,768	1,667	1,620	1,509	Δ 2.8	△ 6.8	
	Common squid	939	715	746	794	813	661	2.4	△ 18.7	
	Others	7,022	6,065	5,7 <u>6</u> 8	5,621	5,296	5,171	Δ 5.8	△ 2.4	

Date: "Annual Statistics of fishery and Aquaculture Production", Ministry of Agriculture, Forestry and Fisheries.

# Changes in Marine Culture production Volume and Value by Type of Fish (Unit: in thousand tons for volume and in hundred million yen for value)

_						yen for value			
				·				Increase/dec	rease rate(%)
		1985	1993	1994	1995	1996	1997	'96/'95	'97/'96
	Total	1,088	1,274	1,344	1,315	1,276	1,273	△ 2.9	$\triangle$ 0.3
	Yellowtails	151	142	148	170	146	138	Δ 14.1	Δ 5.2
	Sea breams	28	73	77	72	77	81	6.8	4.9
ဥ	Common scallop	109	241	199	228	266	254	16.6	△ 4.3
Volume	Oyster	251	236	223	227	223	218	△ 2.0	△ 2.2
Š	Kelp	54	60	58	55	61	60	11.0	△ 1.7
	"Wakame"seaweed	112	90	88	100	78	70	Δ 21.3	△ 10.6
	"Nori"seaweed	352	363	483	407	373	393	△ 8.4	5.3
	Others	31	70	67	56	53	59	△ 4.7	10.2
,	Total	5,225	6,069	6,270	5,739	5,654	5,989	Δ 1.5	5.9
	Yellowtails	1,427	1,372	1,264	1,187		1,439	14.1	6.3
	Sea breams	488	656	783	755	766	741	1.4	△ 3.3
္ရပ္	Common scallop	298	374	377	380	356	417	△ 6.5	17.2
Value	Oyster	304	410	427	409	416	377	1.7	△ 9.3
>	Kelp	80	145	119	92	108	101	17.5	△ 6.4
	"Wakame"seaweed	143	136	159	164	117	115		△ 1.8
	"Nori"seaweed	1,236	1,090	1,341	1,020	979	1,188	△ 4.0	21.3
	Others	1,249	1,886	1,799	1,732	1,559	1,612	△ 10.0	3.4

Date: "Annual Statistics of fishery and Aquaculture Production", Ministry of Agriculture, Forestry and Fisheries.

### Changes in Fishery Product Import Volume and Value by Principal Item

Unit in thousand tons for volume and in hundred million yer for value

				\	for value						
								Incre	ase/dec	rease	rate(%)
		1985	1993	1994	1995	1996	1997	'96	5/95	'9	7/96
	Fishery Products Total	1,577	3,124	3,296	3,582	3,450	3,411	Δ	3.7	Δ	1.1
	Live, fresh, chilled or frozen	1,314	2,505	2,530	2,540	2,560	2,489		0.8	Δ	2.8
	Shrimp snd Prawn	192	317	320	312	305	282	Δ	2.2	Δ	7.6
	Tuna, Marlin	151	304	298	306	309	280	1	0.9	Δ	9.4
	Salmon,Trout	116	229	243	203	232	209	1	14.5	Δ	10.1
	Crab	34	110	124	121	130	124	1	6.8	Δ	4.3
	Cod and Pollack	112	189	214	216	185	188	Δ	14.0		1.5
	Octopus	99	131	106	- 98	96	79	Δ	1.4	Δ	18.1
/olume	Squid and Cuttlefish	113	98	116	86	108	96		24.7	Δ	11.0
20	Flounder, halibuts, sole		. 82	86	71	89	79	1	25.7	Δ	11.5
-	Salted,dried or smoked	42	45	44	42	44	43	i	4.0	Δ	2.0
	Hard rose of herring	8	10	9	8	10	11	İ	14.7		14.6
	Hard rose of salmon	10	10	11	11	7	9	Δ	33.0		19.1
	Prepared	64	162	193	224	247	272		10.4		10.2
	Eel	14	38	. 39	36	46	55		25.8		21.5
	Others	158	412	529	776	599	607	Δ	22.8		1.4
_	Fish Meal	79	302	379	588	408	432	Δ	30.7		5.9
	Fishery Products Total(A)	11,760	16,276	17,091	17,212	19,138	19,456		11.2		1.7
	Live,fresh,chilled or frozen	9,659	13,074	13,710	13,593	14,861	14,967		9.3		0,7
	Shrimp snd Prawn	3,386	3,595	3,753	3,686	3,772	3,930	ĺ	2.3		4.2
	Tuna,Marlin	860	1,893	1,865	1,819	2,204	2,034		21.1	Δ	7.7
	Salmon,Trout	1,166	1,186	1,313	995	1,220	1,189		22.6	Δ	2.6
	Crab	335	991	1,229	1,278	1,238	1,089	Δ	3.1	Δ	12.0
•	Cod and Pollack	265	417	471	487	403	537	Δ	17.4		33.4
	Octopus	552	430	435	499	653	555		30.9	Δ	15.0
Value	Squid and Cuttlefish	649	468	570	470	572	541	۔ ا	21.6	Δ	5.3
>	Flounder, halibuts, sole		259	261	239	317	264	••	33.0	Δ	16.9
	Salted,dried or smoked	843	568	516	527	642	514		21.7	Δ	19.9
	Hard rose of herring	312	196	168	173	264	172		52.4	Δ	34.9
	Hard rose of salmon	190	152	157	142	102	86	Δ	28.0	Δ	15.6
	Prepared	746	1,876	2,009	2,199	2,639	2,887		20.0		9.4
	Eel	325	850	872	863	1,031	1,152		19.5		11.7
	Others	513	759	856	893	996	1,089		11.6		9.3
	Fish Meal	80	181	202	329	307	356	Δ	6.7		16.0
Tot	al Value of Japan's Imports(B)	310,849	268,264	281,043	315,488	379,934	409,562		20.4		7.8
	(A)/(B) (%)	3.8	6.1	6.1	5.5	5.0	4.8				

Data: "Japan Trade Statistics", Ministry of Finance.

### Changes in Fishery Product Import Volume and Value by Origin

Unit in thousand tons for volume and in hundred million yet

					\	for value				
								Increase/dec	_	
		1985	1993	1994	1995	1996	1997	'96/'95	9'	7/96
	Total	1,577	3,124	3,296	3,582	3,450	3,411	△ 3.7	Δ	1.1
	China	57	266	309	329	355	400	7.8		12.7
	U.S.A	352	558	553	502	488	432	△ 2.8	Δ	11.5
	Indonesia	36	133	138	146	144	146	Δ 1.3		0.9
	Thailand	50	183	192	208	187	191	Δ 10.0		1.8
/olume	Russian Fed.	41	134	187	226	223	208	Δ 1.7	Δ	6.7
2	Korea Rep.	265	191	200	195	192	186	∆ 1.9	Δ	2.9
	Chile	41	240	297	502	386	351	△ 23.2	Δ	9.1
	Taiwan	107	212	159	144	136	113	Δ 6.0	Δ	16.8
	India	41	48	54	56	71	75	25.9		6.8
	Canada	61	95	89	78	90	83	15.8	Δ	7.8
	Total	11,760	16,276	17,091	17,212	19,138	19,456	11.2		1.7
	China	458	1,412	1,768	1,942	2,365	2,767	21.7		17.0
	U.S.A	2,190	2,718	2,594	2,300	2,323	2,024	1.0	Δ	12.9
	Indonesia	539	1,104	1,236	1,239	1,358	1,423	9.6		4.8
_	Thailand	432	1,329	1,383	1,468	1,353	1,386	△ 7.9		2.4
Vaiue	Russian Fed.	225	791	1,054	1,262	1,347	1,260	6.7	Δ	6.4
>	Korea Rep.	1,641	1,330	1,286	1,218	1,335	1,244	9.6	Δ	6.9
	Chile	125	446	517	755	762	959	1.0		25.9
	Taiwan	1,372	1,627	1,173	1,000	1,122	897	12.3	Δ	20.1
	India	554	411	554	545	677	813	24.1		20.0
	Canada	636	718	795	765	846	736	10.6	Δ	13.0

Data: "Japan Trade Statistics", Ministry of Finance.

# Changes In Fishery Product Export Volume and Value by Principal Item ( Unit in thousand Ions for volume and In hundred million yen for value)

		minton yen to: value										
								Increase/decrease rate(%)				
		1985	1993	1994	1995	1996	1997	96/95		'9	97/96	
	Fishery Products Total	786	385	296	240	275	343		14.7		24.7	
	Fish,fresh,chilled or frozen	135	257	203	159	157	244	Δ	1.2		55.8	
	Tuna, Marlin	15	45	41	37	32	58	Δ	12.8		81.9	
	Skipjack and Frigate mackerel	33	57	26	45	19	43	Δ	57.2		124.4	
	Salmon, Trout	0	0	7	19	37	35	1	94.5	Δ	7.0	
	Mackerel	13	24	22	4	18	49		290.3		181.0	
	Flounder,halibuts,sole	9	4	7	3	3	6	△	18.4		120.2	
	Fish, Salted, dried or smoked	2	1	1	1	1	1		20.1	Δ	16.6	
Ĕ	Crustacean, Mollusca	15	17	17	20	58	41		189.1	Δ	29.1	
Volume	Canned	165	26	21	11	10	11	Δ	15.0		12.2	
_	Mackerel	59	11	9	5	4	5	Δ	18.8		41.5	
	Sardine	69	11	9	4	3	3	Δ	25.1	Δ	9.9	
	Fish oil	250	13	4	3	1	2	Δ	58.8		93.7	
	Pearl(tons)	213	84	71	50	54	56	_	8.0		3.7	
	Others	218	70	50	46	48	43		4.8	Δ	9.9	
	Surimi-based product	45	10	10	7	9	13	1	24.3		38.7	
	Fish meal	157	41	21	19	16	8	Δ	12.8	Δ	49.7	
	Fishery Products Total(A)	2,876	1,347	1,232	1,108	1,340	1,698	_	21.0		26.7	
	Fish,fresh,chilled or frozen	356	323	294	248	270	450		8.8	_	66.5	
	Tuna, Marlin	54	108	100	80	81	150		0.8		85.5	
	Skipjack and Frigate mackerel	43	46	22	35	18	53	Δ	50.0		200.3	
	Salmon, Trout	2	0	7	14	26	37		90.8		44.2	
	Mackerel	18	20	13	6	15	33		165.3		115.3	
	Flounder, halibuts, sole	44	12	23	11	13	23	l	21.6		72.9	
	Fish, Salted, dried or smoked	37	22	21	22	21	23	Δ	3.2		9.7	
Value	Crustacean, Mollusca	214	87	96	90	135	187		50.4	ĺ	37.8	
>	Canned	568	86	61	36	35	39 س	Δ	3.2		10.6	
	Mackerel	157	32	23	12	10	15	Δ	15.6	i	39.7	
	Sardine	146	26	21	11	9	9	Δ	18.2	Δ	5.5	
	Fish oil	146	16	10	9	11	12		25.3		5.3	
	Pearl	826	431	415	390	518	573	ĺ	33.0		10.5	
	Others	729	383	335	313	349	415	1	11.5		18.8	
	Surimi-based product	312	63	57	43	50	88	İ	17.3		75.9	
	Fish meal	150	30	13	10	10		Δ	3.8	Δ	45.0	
Tota	il Value of Japan's Imports(B)	419,557	402,024	404,976	415,309	447,313	509,380		7.7		13.9	
(A)/(B) (%)		0.7	0.3	0.3	0.3	0.3	0.3					

Data: "Japan Trade Statistics", Ministry of Finance.

### Changes in Fishery Product Export by Destination

(Unit:in thousand tons for volume and in hundred million

_							yen for value					
								Increase/decrease rate(%)				
		1985	1993	1994	1995	1996	1997	'96/'95	'97/'96			
Volume	Total	786	385	296	240	275	343	14.7	24	1.7		
	Hong kong	6	8	9	12	15	16	32.2	7	7.1		
	U.S.A	82	19	19	13	13	26	2.3	89	9.9		
	Taiwan	159	38	19	17	20	16	15.4	Δ 20	),4		
	Korea Rep.	31	17	17	20	22	30	9.3	38	3.2		
	Thailand	7	78	46	61	38	56	△ 38.2	50	).2		
	Switzerland	2	0	0	0	0	0	△ 87.8	Δ 11	0,1		
	China	2	7	13	31	74	48	140.6	Δ 35	5.8		
	Germany	55	1	1	0	0	0	218.3	Δ 31	1.1		
	Singapore	15	12	4	10	6	3	△ 42.6	Δ 40	0.0		
	Philippine	6	70	54	77	64	46	△ 16.7	△ 28	3.0		
	Total	2,876	1,347	1,232	1,108	1,340	1,698	21.0	26	5.7		
	Hong kong	240	286	296	281	319	399	13.4	25	i.1		
	U.S.A	1,080	235	226	194	243	357	25.2	47	1.1		
	Taiwan	206	131	109	99	113	132	13.4	16	i.8		
	Korea Rep.	30	65	67	67	95	96	41.5	ı	.3		
	Thailand	22	74	49	63	63	96	0.5	51	.0		
	Switzerland	111	66	64	67	76	93	14.3	22	.4		
	China	5	.9	17	31	64	58	105.2	Δ 9	.1		
	Germany	102	62	48	36	47	45	30.1	∆ 2	8.5		
	Singapore	42	36	31	38	46	41	22.0	Δ 11	.5		
	Philippine	4	34	26	33	29	35	△ 13.2	20	0.0		

Date: "Japan Trade Statistic", Ministry of Finance